

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of September 10, 2007 is respectfully requested.

By this Amendment, claim 1 has been amended and new claims 13-16 have been added. Thus, claims 1-6 and 10-16 are currently pending in the application. No new matter has been added by these amendments.

On pages 2-3 of the Office Action, the Examiner rejected claims 1 and 10 under 35 U.S.C. § 102(b) as being anticipated by McMaster (US 4,470,858). In addition, on pages 3-5 of the Office Action, the Examiner rejected claims 1-6 and 10-12 under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA) in view of Tsujimoto et al. (US 7,063,768). For the reasons discussed below, it is respectfully submitted that the amended claims are clearly patentable over the prior art of record.

The discussion of the invention provided below makes reference to the figures of the present application. However, these references are made only for the Examiner's benefit, and are not intended to limit the claims.

The present invention is directed to a method of manufacturing a circuit forming board. As shown in Fig. 1, a sheet 1 extends in a first direction 102, and the sheet is dipped in varnish 2 while being transferred in a second direction 101 which is parallel to the first direction 102 in order to form prepreg sheet 3. As shown in Figs. 3 and 5A, films 4 are stuck onto both surfaces of prepreg sheet 3 while being transferred in a third direction 104 which is orthogonal to the first direction 102, with the films 4 being arranged to be entirely peeled off from the surfaces of the prepreg sheet 3, as shown in Fig. 5D.

Amended independent claim 1 recites a method of manufacturing a circuit forming board, comprising transferring a first sheet, which extends in a first direction, in a second direction such that the first direction of the first sheet is parallel to the second direction. The method of claim 1 also comprises sticking films onto both surfaces of the first sheet while transferring the first sheet in a third direction orthogonal to the first direction of the first sheet, with the films being arranged to be entirely peeled off from both surfaces of the first sheet.

McMaster discloses a lamination process which, as shown in Figs. 24 and 25, includes

applying adhesive to surfaces of glass plates 300, 302, and a sheet of substrate 310 is applied to the adhesive on one of the glass plates 300, 302. The glass plates 300, 302 are then pivoted on their side edges so as to be oriented vertically, and pressed together such that the substrate 310 is sandwiched between the glass plates 300, 302. The glass plates 300, 302 and substrate 310 are then moved through rollers 320, 322 to increase the spread of adhesive between the substrate 310 and the glass plates 300, 302, and are then moved under ultraviolet lamps 330 for curing the adhesive.

However, McMaster does not disclose *the films being arranged to be entirely peeled off from both surfaces of the first sheet*, as required by amended independent claim 1. In this regard, it is noted that on pages 2 and 5 of the Office Action, the Examiner asserts that Fig. 8 of McMaster discloses the films being peeled off from the first sheet 60. However, it is noted that Fig. 8 of McMaster does not disclose that the films are arranged to be entirely peeled off from the first sheet, because McMaster only discloses that the portion of the substrate material which extends from the side edges of the laminated glass sheet is trimmed off (column 12, lines 46-49).

In addition, it is noted that Fig. 8 of McMaster also does not disclose that the films are arranged to be entirely peeled off from both surfaces of the first sheet (*i.e.*, the surfaces of the first sheet to which the films are stuck). Rather, McMaster only discloses the trimming off of the portion of the substrate material which extends from the side edges of the laminated glass sheet (*i.e.*, a portion which is not adhered to the laminated glass sheet). Therefore, McMaster does not disclose films arranged to be entirely peeled off from both surfaces of the first sheet (*i.e.*, the surfaces of the first sheet to which the films are stuck). Accordingly, it is respectfully submitted that McMaster does not disclose all the limitations of independent claim 1.

The Applicants' Admitted Prior Art (AAPA), as shown in Figs. 6 and 7 of the present application, discloses a glass cloth 11 having a side extending in a first direction 202 and being moved in a direction 201 parallel to the first direction 202. Films 14 are then applied to the sheet as the sheet is moved in the direction 201 parallel to the first direction 202. Thus, as noted by the Examiner, the AAPA does not disclose the films being applied to the sheet while the sheet is transferred in a third direction orthogonal to the first direction, as required by independent claim 1.

Tsujimoto discloses a method for producing a laminated composite which, as shown in Fig. 22, includes a longitudinal sheet S1 which is bonded to a core material C by thermocompression bonding to form an intermediate lamination which is cut into pieces L1. The cut pieces L1 are rotated 90°, and a lateral sheet S2 is bonded to the pieces L1 to form a final lamination L2. Based on the disclosure of Tsujimoto, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to modify the AAPA by utilizing the transferring of the pieces L1 in a direction orthogonal to the first direction to obtain a circuit board having good thickness precision (col. 19, lines 22-23 and col. 37, line 34 of Tsujimoto), as stated on pages 3-4 of the Office Action.

In this regard, it is noted that Tsujimoto does not disclose that the rotating of the pieces L1 produces a good thickness precision. Rather, column 19, lines 17-24 state that “in the present invention, the pressure is not controlled but displacement in the range of the compressive elasticity area is changed, thereby performing the above-mentioned compression. According to this method, even if the heating temperature of the thickness of the foamed body sheet changes, a laminated composite having a good thickness precision can be obtained.” In addition, column 37, lines 31-36 state that “the pressing quantity is controlled by the compressive strain quantity of the foamed body sheets; therefore, even if the heating temperature changes, laminated composites having a uniform thickness can be produced.” Thus, Tsujimoto clearly states that the thickness precision of the laminate structure is obtained by changing the displacement in the range of the compressive elasticity area, or by controlling the compressive strain quantity. Tsujimoto does not disclose or even suggest that the rotating of the pieces L1 produces a good thickness precision, and therefore one of ordinary skill in the art would not have transferred the sheet of AAPA in a third direction orthogonal to the first direction based on Tsujimoto.

Further, it is noted that Tsujimoto is directed to a method of producing a laminated composite which is used as a civil engineering and construction material, and in particular, as a tatami mat core material for the floor of a house. The sheets S1 and S2 serve as the face material on the surface of the core material, as shown in Fig. 4. As stated in column 2, lines 50-58, the face material is composed of the longitudinal sheets S1 and the lateral sheets S2 in an orthogonal form in order to cancel anisotropy in the longitudinal and lateral directions. However, as stated

above, amended independent claim 1 recites that *the films are arranged to be entirely peeled off from both surfaces of the first sheet*. As described above, Tsujimoto discloses that the sheets S1 and S2 are thermocompressed onto the core material and are necessary to eliminate the anisotropy of the composite structure. Therefore, Tsujimoto teaches away from the sheets S1 and S2 being arranged to be entirely peeled off from the core structure, because doing so would make the invention of Tsujimoto unsatisfactory for its intended purpose, and therefore one of ordinary skill in the art would not have had a reason to transfer the sheet of AAPA in a third direction orthogonal to the first direction based on Tsujimoto.

Therefore, for the reasons presented above, it is believed apparent that the present invention as recited in amended independent claim 1 is not disclosed or suggested by the AAPA and the Tsujimoto reference taken either individually or in combination. Accordingly, a person having ordinary skill in the art would clearly not have modified the AAPA in view of the Tsujimoto reference in such a manner as to result in or otherwise render obvious the present invention of independent claim 1.

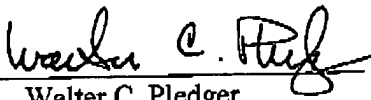
Therefore, it is respectfully submitted that amended independent claim 1, as well as claims 2-6 and 10-16 which depend therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice to that effect is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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December 10, 2007